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DIALOG(R)File 351:Derwent WPI

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New silane coupling agent - used as crosslinking agent for rubber,

waterproofing agent and metal surface protection agent

Patent Assignee: BRIDGESTONE TIRE KK (BRID)

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 1029385	A	19890131	JP 87185439	A	19870727	198910
B						
JP 2630596	B2	19970716	JP 87185439	A	19870727	199733

Priority Applications (No Type Date): JP 87185439 A 19870727

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 1029385	A		6		
JP 2630596	B2		6		Previous Publ. patent JP 1029385

Abstract (Basic): JP 1029385 A

Silane coupling agent(s) of formula $YSi(X_n)R_{3-n}$ (I) is new. In (I)

R is Hydrocarbon gp(s). X is Hydrolysable substit(s); Y is Substit(s)

contg. at least one C-C double bond(s) to which at least one electron

withdrawing gp(s) and no electron donating gp bind, or, at least two

electron withdrawing gps. and one electron donating gp. bind, and, n is

1-3.

Specifically cpds. are e.g. of formula (Ia) and (Ib). (I) is added

to rubber modified or reinforced by inorganic filler e.g. finely

grained silica etc. with other additives to improve hardness, workability, flexibility and mechanical property. The ratio of (I)/rubber (wt./wt.) is 10^{-4} to $10^{-0.3}$, esp. 10^{-3} to 10^{-0} .

1.

In an example N-Allylmaleimide (1.36g) and trimethoxysilane (1.22

g) were dissolved in chloroform (100 ml) at room temp. under ordinary

pressure. Chloroplatinic acid THF soln. (10%, 0.01 g) was added to the

soln, and the mixt. was stirred for 12 hr under reflux. Chloroform was

evaporated to obtain (Ia). USE/ADVANTAGE - (I) is useful as (silane

coupling agent) cross linking agent(s) for rubber modified or reinforced by inorganic filler(s) or waterproofing agent(s) and metal

surface protective agent(s) etc. (I) improves the mechanical property,

workability and hardness etc. of rubber.

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Derwent Class: A60; E11

International Patent Class (Main): C07F-007/18

International Patent Class (Additional): C07F-007/18